

Amendments to the Claims:

Listing of Claims:

1. (Currently Amended) A method, in a data processing system, for reducing the size of an object, the method comprising:
 - dividing an object into a plurality of blocks, wherein each block of the plurality of blocks comprises a plurality of features, each of the plurality of features corresponding to one of a plurality of fingerprints;
 - calculating a super fingerprint for each of the plurality of blocks to form a plurality of super fingerprints, wherein each of the set of the super fingerprints is calculated by merging ones of the plurality of fingerprints for a particular block of the plurality of blocks;
 - ~~identifying similar blocks within the plurality of blocks;~~
 - ~~differentially compressing the similar blocks;~~
 - responsive to dividing the object into the plurality of blocks, identifying identical blocks within the plurality of blocks;
 - suppressing the identical blocks without differentially compressing the identical blocks;
 - responsive to suppressing the identical blocks without differentially compressing the identical blocks, identifying similar blocks within the plurality of blocks;
 - differentially compressing the similar blocks;
 - performing data compression on at least one block within the plurality of blocks, wherein the at least one block is not differentially compressed, wherein the at least one block is not suppressed, and wherein the step of performing data compression on the at least one block forms a reduced object; and
 - storing the reduced object in a computer storage readable media.
2. (Original) The method of claim 1, wherein the plurality of blocks are fixed in size.
3. (Original) The method of claim 1, wherein the plurality of blocks are variable in size and determined based on characteristics of content of the object.

- 4-6. (Canceled).
7. (Original) The method of claim 1, further comprising:
compressing the object to form a compressed object;
comparing an effectiveness of the compressed object with an effectiveness of the reduced object; and
using the compressed object if the effectiveness of the compressed object is greater than the effectiveness of the reduced object.
8. (Original) The method of claim 7, wherein effectiveness is measured by one of speed of execution and object size.
9. (Original) The method of claim 7, further comprising:
using the reduced object if the effectiveness of the compressed object is less than the effectiveness of the reduced object.
10. (Original) The method of claim 1, wherein identifying similar blocks includes identifying one or more features of the plurality of blocks.
11. (Original) The method of claim 10, wherein identifying one or more features includes calculating one or more fingerprints for the plurality of blocks.
12. (Previously Presented) The method of claim 11, wherein identifying similar blocks further includes:
merging the one or more fingerprints for the plurality of blocks to form one or more fingerprint groups;
calculating super fingerprints for the one or more fingerprint groups; and
comparing the super fingerprints to each other to determine common features among the super fingerprints.

13. (Original) The method of claim 10, wherein identifying similar blocks further includes:
determining whether blocks have a specified number of matching features.
14. (Original) The method of claim 10, wherein identifying similar blocks further includes:
identifying a reference block that matches a greatest number of features of remaining
similar blocks.
15. (Original) The method of claim 10, wherein identifying similar blocks includes:
using heuristics to identify similar blocks.
16. (Canceled).
17. (Original) The method of claim 1, wherein the reduced object is transmitted over a
network.
18. (Currently Amended) A data processing apparatus for reducing the size of an object, the
apparatus comprising:
software instructions and hardware for executing the software instructions, wherein the
software instructions further comprise:
division means for dividing an object into a plurality of blocks, wherein each block of the
plurality of blocks comprises a plurality of features, each of the plurality of features
corresponding to one of a plurality of fingerprints;
calculating means for calculating a super fingerprint for each of the plurality of blocks to
form a plurality of super fingerprints, wherein each of the set of the super fingerprints is
calculated by merging ones of the plurality of fingerprints for a particular block of the plurality
of blocks;
~~identification means for identifying similar blocks within the plurality of blocks;~~
~~compression means for differentially compressing the similar blocks;~~
means, responsive to dividing the object into the plurality of blocks, for identifying
identical blocks within the plurality of blocks;

means for suppressing the identical blocks without differentially compressing the identical blocks;

means, responsive to suppressing the identical blocks without differentially compressing the identical blocks, for identifying similar blocks within the plurality of blocks;

means for differentially compressing the similar blocks;

means for performing data compression on at least one block within the plurality of blocks, wherein the at least one block is not differentially compressed, wherein the at least one block is not suppressed, and wherein the means for performing data compression on the at least one block forms a reduced object; and

means for storing the reduced object in a computer storage readable media.

19. (Original) The apparatus of claim 18, wherein the plurality of blocks are fixed in size.

20. (Original) The apparatus of claim 18, wherein the plurality of blocks are variable in size and determined based on characteristics of content of the object.

21-23. (Canceled).

24. (Currently Amended) The apparatus of claim [[21]] 18 , further comprising:

means for compressing the object to form a compressed object;

means for comparing an effectiveness of the compressed object with an effectiveness of the reduced object; and

means for using the compressed object if the effectiveness of the compressed object is greater than the effectiveness of the reduced object.

25. (Original) The apparatus of claim 24, wherein effectiveness is measured by one of speed of execution and object size.

26. (Original) The apparatus of claim 24, further comprising:

means for using the reduced object if the effectiveness of the compressed object is less than the effectiveness of the reduced object.

27. (Original) The apparatus of claim 18, wherein the identification means includes means for identifying one or more features of the plurality of blocks.

28. (Original) The apparatus of claim 27, wherein the means for identifying one or more features includes means for calculating one or more fingerprints for the plurality of blocks.

29. (Previously Presented) The apparatus of claim 28, wherein the identification means further includes:

means for merging the one or more fingerprints for the plurality of blocks to form one or more fingerprint groups;

means for calculating super fingerprints for the one or more fingerprint groups; and

means for comparing the super fingerprints to each other to determine common features among the super fingerprints.

30. (Original) The apparatus of claim 27, wherein the identification means further includes: means for determining whether blocks have a specified number of matching features.

31. (Original) The apparatus of claim 27, wherein identification means further includes: means for identifying a reference block that matches a greatest number of features of remaining similar blocks.

32. (Original) The apparatus of claim 18, wherein the reduced object is stored in a storage unit.

33. (Original) The apparatus of claim 18, wherein the reduced object is transmitted over a network.

34. (Currently Amended) A computer program product, in a computer storage readable medium, for reducing the size of an object, the computer program product comprising:

instructions for dividing an object into a plurality of blocks, wherein each block of the plurality of blocks comprises a plurality of features, each of the plurality of features corresponding to one of a plurality of fingerprints;

instructions for calculating a super fingerprint for each of the plurality of blocks to form a plurality of super fingerprints, wherein each of the set of the super fingerprints is calculated by merging ones of the plurality of fingerprints for a particular block of the plurality of blocks

~~instructions for identifying similar blocks within the plurality of blocks;~~

~~instructions for differentially compressing the similar blocks;~~

instructions, responsive to dividing the object into the plurality of blocks, for identifying identical blocks within the plurality of blocks;

instructions for suppressing the identical blocks without differentially compressing the identical blocks;

instructions, responsive to suppressing the identical blocks without differentially compressing the identical blocks, for identifying similar blocks within the plurality of blocks;

instructions for differentially compressing the similar blocks;

instructions for performing data compression on at least one block within the plurality of blocks, wherein the at least one block is not differentially compressed, wherein the at least one block is not suppressed, and wherein the step of performing data compression on the at least one block forms a reduced object; and

storing the reduced object in a computer storage readable media.

35-36. (Canceled).

37. (New) The method of claim 1, wherein the step of identifying identical blocks within the plurality of blocks further comprises:

identifying identical blocks within the plurality of blocks, wherein identical blocks are identified when ones of the plurality of blocks have identical super fingerprints.

38. (New) The method of claim 1, wherein the step of suppressing the identical blocks without differentially compressing the identical blocks further comprises:

suppressing the identical blocks without differentially compressing the identical blocks, wherein the identical blocks are suppressed by replacing ones of the identical blocks with a reference to an identical block.

39. (New) The method of claim 1, further comprising:

responsive to suppressing the identical blocks without differentially compressing the identical blocks, identifying similar blocks within the plurality of blocks, wherein similar blocks are identified when the ones of the plurality of blocks have a predetermined number of matching fingerprints of their plurality of fingerprints; and

responsive to identifying similar blocks within the plurality of blocks, selecting a reference block from the similar blocks.

40. (New) The method of claim 39, wherein the step of differentially compressing the similar blocks further comprises:

differentially compressing the similar blocks, wherein differentially compressing the similar blocks comprises performing delta encoding on the similar blocks in reference to the reference block